What is claimed is:

1. A composition comprising an organic polysilica partial condensate of one or more silanes of formula (I) and one or more silanes of formula (II):

$$R_aSiY_{4-a} \quad (I)$$

$$R^1{}_b(R^2O)_{3-b}Si(R^3)_cSi(OR^4)_{3-d}R^5{}_d \quad (II)$$

wherein R is hydrogen, $(C_1\text{-}C_8)$alkyl, $(C_7\text{-}C_{12})$arylalkyl, substituted $(C_7\text{-}C_{12})$arylalkyl, aryl, and substituted aryl; Y is any hydrolyzable group; a is an integer of 1 to 2; R^1, R^2, R^4 and R^5 are independently selected from hydrogen, $(C_1\text{-}C_6)$alkyl, $(C_7\text{-}C_{12})$arylalkyl, substituted $(C_7\text{-}C_{12})$arylalkyl, aryl, and substituted aryl; R^3 is $(C_1\text{-}C_{10})$alkyl, $-(CH_2)_h-$, $-(CH_2)_{h1}\text{-}E_k\text{-}(CH_2)_{h2}-$, $-(CH_2)_h\text{-}Z$, arylene, substituted arylene, or arylene ether; E is oxygen, NR^6 or Z; Z is aryl or substituted aryl; R^6 is hydrogen, $(C_1\text{-}C_6)$alkyl, aryl or substituted aryl; b and d are each an integer of 0 to 2; c is an integer of 0 to 6; and h, h1, h2 and k are independently an integer from 1 to 6; provided that at least one of R, R^1, R^3 and R^5 is not hydrogen; wherein the partial condensate has a weight average molecular weight of $\leq$ 10,000.

2. The composition of claim 1 wherein R^3 is selected from the group consisting of methylene, ethylene, propylene, butylene, hexylene, norbornylene, cycloheylene, phenylene, phenylene ether, naphthylene and $-CH_2\text{-}C_6H_4\text{-}CH_2-$.

3. The composition of claim 1 wherein the organic polysilica partial condensate further comprises one or more silanes of the formula

$$M^n(OR^{11})_n$$

wherein M is aluminum, titanium, zirconium, silicon, magnesium, or boron; R^{11} is $(C_1\text{-}C_6)$alkyl, acyl, or $Si(OR^{12})_3$; R^{12} is $(C_1\text{-}C_6)$alkyl or acyl; and n is the valence of M.

4. The composition of claim 1 wherein the partial condensate has a weight average molecular weight in the range of 2500 to 10,000.

5. A method of preparing an organic polysilica film comprising the step of providing a partial condensate of one or more silanes of formula (I) and one or more silanes of formula (II):

$$R_aSiY_{4-a} \quad (I)$$

$$R^1{}_b(R^2O)_{3-b}Si(R^3)_cSi(OR^4)_{3-d}R^5{}_d \quad (II)$$

wherein R is hydrogen, (C_1-C_8)alkyl, (C_7-C_{12})arylalkyl, substituted (C_7-C_{12})arylalkyl, aryl, and substituted aryl; Y is any hydrolyzable group; a is an integer of 1 to 2; R^1, R^2, R^4 and R^5 are independently selected from hydrogen, (C_1-C_6)alkyl, (C_7-C_{12})arylalkyl, substituted (C_7-C_{12})arylalkyl, aryl, and substituted aryl; R^3 is (C_1-C_{10})alkyl, -$(CH_2)_h$-, -$(CH_2)_{h1}$-E_k-$(CH_2)_{h2}$-, -$(CH_2)_h$-Z, arylene, substituted arylene, or arylene ether; E is oxygen, NR^6 or Z; Z is aryl or substituted aryl; R^6 is hydrogen, (C_1-C_6)alkyl, aryl or substituted aryl; b and d are each an integer of 0 to 2; c is an integer of 0 to 6; and h, h1, h2 and k are independently an integer from 1 to 6; provided that at least one of R, R^1, R^3 and R^5 is not hydrogen; wherein the partial condensate has a weight average molecular weight of $\leq$ 10,000.

6. The method of claim 5 wherein the partial condensate has a weight average molecular weight in the range of 2500 to 10,000.

7. The method of claim 5 wherein partial condensate further comprises one or more silanes of the formula

$$M^n(OR^{11})_n$$

wherein M is aluminum, titanium, zirconium, silicon, magnesium, or boron; R^{11} is (C_1-C_6)alkyl, acyl, or $Si(OR^{12})_3$; R^{12} is (C_1-C_6)alkyl or acyl; and n is the valence of M.

8. The method of claim 5 wherein R^3 is selected from the group consisting of methylene, ethylene, propylene, butylene, hexylene, norbornylene, cycloheylene, phenylene, phenylene ether, naphthylene and -CH_2-C_6H_4-CH_2-.

9. A method of manufacturing a device comprising the steps of:

a) disposing on a substrate an organic polysilica partial condensate of one or more silanes of formula (I) and one or more silanes of formula (II):

$$R_aSiY_{4-a} \qquad (I)$$

$$R^1{}_b(R^2O)_{3-b}Si(R^3)_cSi(OR^4)_{3-d}R^5{}_d \qquad (II)$$

wherein R is hydrogen, (C_1-C_8)alkyl, (C_7-C_{12})arylalkyl, substituted (C_7-C_{12})arylalkyl, aryl, and substituted aryl; Y is any hydrolyzable group; a is an integer of 1 to 2; R^1, R^2, R^4 and R^5 are independently selected from hydrogen, (C_1-C_6)alkyl, (C_7-C_{12})arylalkyl, substituted (C_7-C_{12})arylalkyl, aryl, and substituted aryl; R^3 is (C_1-C_{10})alkyl, -$(CH_2)_h$-, -$(CH_2)_{h1}$-E_k-$(CH_2)_{h2}$-, -

$(CH_2)_h$-Z, arylene, substituted arylene, or arylene ether; E is oxygen, NR^6 or Z; Z is aryl or substituted aryl; R^6 is hydrogen, $(C_1$-$C_6)$alkyl, aryl or substituted aryl; b and d are each an integer of 0 to 2; c is an integer of 0 to 6; and h, h1, h2 and k are independently an integer from 1 to 6; provided that at least one of R, R^1, R^3 and R^5 is not hydrogen; wherein the partial condensate has a weight average molecular weight of $\leq$ 10,000; and

b) curing the organic polysilica partial condensate to form an organic polysilica film.

10. The method of claim 9 wherein the organic polysilica partial condensate further comprises one or more silanes of the formula

$$M^n(OR^{11})_n$$

wherein M is aluminum, titanium, zirconium, silicon, magnesium, or boron; R^{11} is $(C_1$-$C_6)$alkyl, acyl, or $Si(OR^{12})_3$; R^{12} is $(C_1$-$C_6)$alkyl or acyl; and n is the valence of M.

11. The method of claim 9 wherein the partial condensate has a weight average molecular weight in the range of 2500 to 10,000.

12. The method of claim 9 wherein R^3 is selected from the group consisting of methylene, ethylene, propylene, butylene, hexylene, norbornylene, cycloheylene, phenylene, phenylene ether, naphthylene and $-CH_2-C_6H_4-CH_2-$.

13. The method of claim 9 wherein the device is selected from the group consisting of electronic devices, optoelectronic devices, optical devices, and display devices.

14. A method of preparing an organic polysilica partial condensate comprising the steps of: a) reacting one or more organosilanes and water in the presence of a condensation catalyst at a temperature and time sufficient to provide an organic polysilica partial condensate having a desired molecular weight, and b) treating the partial condensate with a catalyst removing agent, to remove substantially all of the catalyst.

15. The method of claim 14 wherein less than 1% of the catalyst remains after treatment with the catalyst removing agent.